

Work Order ID 138766

November 12, 2015 10:24:19 AM

138766

For Stock.

~~Stock very low~~

Now for an order shipping

Page 1

Item ID: 647.3917

Revision ID:

Item Name: Doubler

Start Date: 11/12/2015 Start Qty: 10.00

Required Date: 11/26/2015 Req'd Qty: 10.00

Reference:

Accept

N9000040100

Setup Start

NS1

Feb 12.

Stop

NS2

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC.(Y/N):

Date:

Run

Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

647.3900

C2

110

0.00

110

Waterjet

FLOW CNC Waterjet

Memo

1-Cut as per Dwg

Dwg Rev:

Prog Rev:

2-Deburr if necessary

0.03

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Quality Control

Memo

0.00

40

16-2-5

DAS
50
9-89

40

16-2-5

DAS
50
9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

Work Order ID 138766

November 12, 2015 10:24:19 AM

138766

Page 2

Item ID: 647.3917 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Doubler
 Start Date: 11/12/2015 Start Qty: 10.00 ***10*** Cust Item ID:
 Required Date: 11/26/2015 Req'd Qty: 10.00 ***10*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC8- Inspect parts - second check	0.00							DAS 38 9-89
130									
QC	Memo	0.00							
Quality Control									FEB 08 2016
140	Outsource process-Anodize per QSI017 4.1.10.1	0.00							DAS 13 9-89
140									
Outsource4	Memo	30.00							
Outsource process - Anodize	Issue P/O to ATG : <u>31336</u>								
	1- Black Anodize as per Dwg 647.3900								
	2- PRIME AS PER DWG								
	Certification of Comformity is required								
150	Receive & Inspect for Damage & Mat'l Certs	0.00							
150									
Packaging	Memo	0.00							
Packaging									

40X SP/6-02-16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
				Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
				Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
				Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
				Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
				Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
				Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
				Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐				OTHER : _____			

Work Order ID 138766

November 12, 2015 10:24:19 AM

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Page 3

Item ID: 647.3917 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Doubler
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 Required Date: 11/26/2015 Req'd Qty: 10.00 ***10*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC5- Inspect part completeness to step on W/O	0.00							DAS 38 9-89
160									
QC	Memo	0.00							
Quality Control									FEB 16 2016
190	Identify as per dwg & Stock Location: <u>CCK11</u>	0.00							DAS 6 9-89
190									
Packaging	Memo	0.00							
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***								FEB 16 2016
200	QC21- Final Inspection - Work Order Release	0.00							
200									
QC	Memo	0.02							
Quality Control									FEB 16 2016

Signature 20160216

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

November 12, 2015 10:24:24 AM

Page 1

Work Order ID: 138766

138766

Parent Item: 647.3917

647.3917

Parent Item Name: Doubler

Start Date: 11/12/2015

Required Date: 11/26/2015

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP REV:A 14.12.03 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.090		Purchased			No		sf	50.5000		0.456842			
M2024T3S 090									**				
2024-T3 .090 sheet													

Location

MAT021

123287

m130387

Loc Qty

50.5

18.5

32

Loc Code

16-25
3



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO. 04948

SHEET 1 OF 2

DWG NO. 647.3900

REV: C

PREPARED BY: M. ANDECK

DATE: 05/04/15

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: DEFLECTORS

APPROVED BY:

ENGR

MFG

QC

EFF:

CURRENT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: REVISED TOLERANCE AND NOTES

ECR:

D-15-01

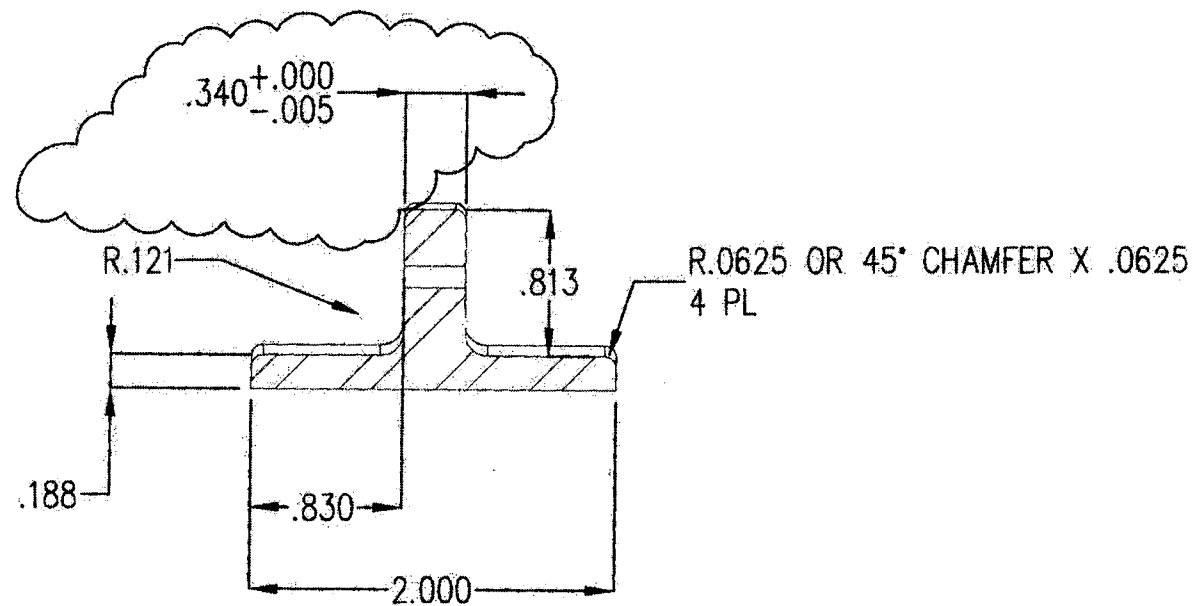
NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
- 5 APPLY F/N 3 AS REQUIRED TO ALL FAYING SURFACES OF F/N 6, 7 & 8 UPON ASSY.
- 6 MAXIMUM OR MINIMUM DIMENSION AFTER FINISH.
7. .0625 HOLE MAY BE ADDED FOR FINISHING PURPOSES
- 8 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX. APPLY FINISH AFTER ASSEMBLY.
- 9 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX.
- 10 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4.

SHEET 1, ZONE B1 IS:

11	R	647.3917	2				DOUBLER		
F/N TC	PART NUMBER	.3903	.3902	.3901			DESCRIPTION	MATERIAL	SPECIFICATION
			QTY						
DOCUMENTS EFFECTED:								CHANGE CATEGORY	DER REVIEW REQUIRED
☐ PATTERN ☐ MDL ☐ INSTALL INSTRU ☐ ICA ☒ BOM								☐ MAJOR ☒ MINOR	☐ YES ☒ NO

SHA 138766 20151112



SECTION AT-AT

SHEET 11, ZONE C1 IS:

INDUSTRIES, INC.

SHEET 1 OF 2

EFFECT ON DWG
☐ INC. ☒ UNINC.

EFF.	NEXT ORDER
------	------------

ECR: D-14-04

6 IS:

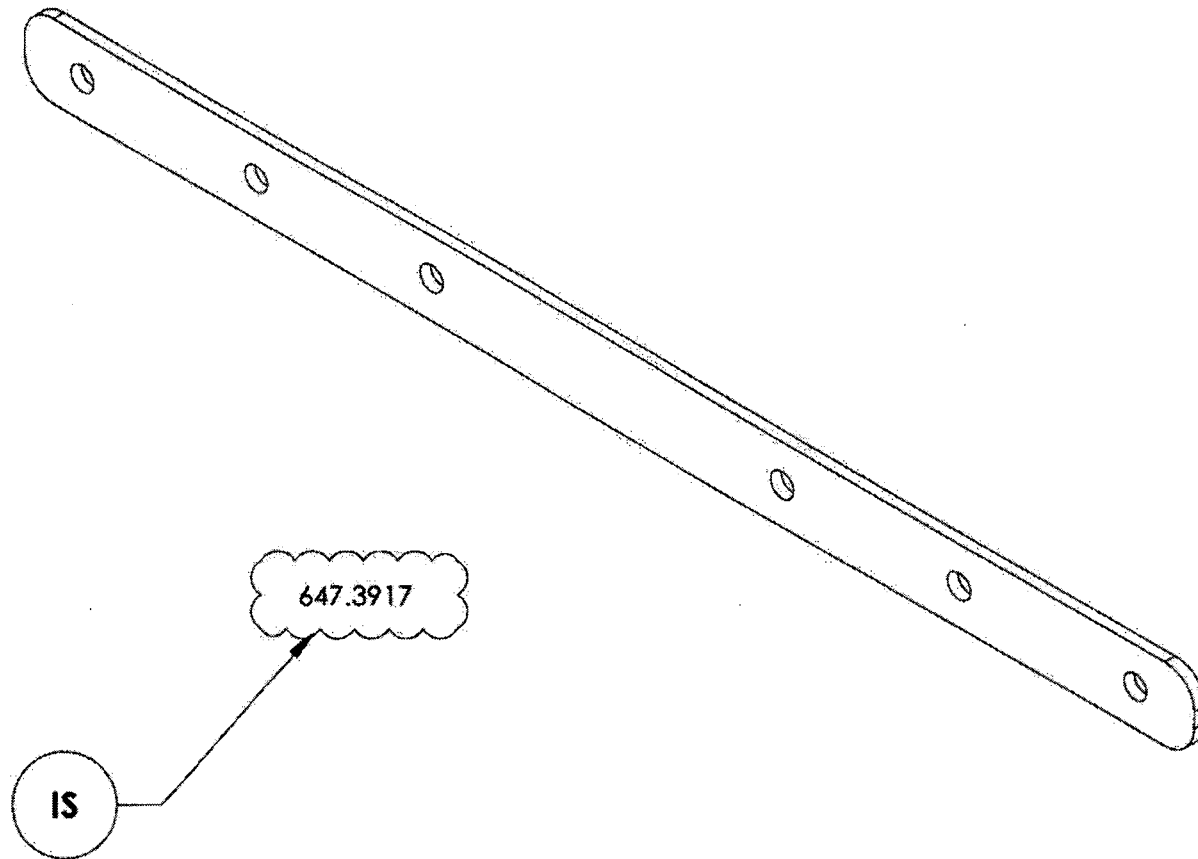
Technical drawing of a 6 IS section. The drawing shows a vertical section with a central hole. Dimensions and tolerances are indicated as follows:

- Overall height: 4.483
- Top flange width: .480
- Top flange thickness: .560
- Web thickness: .362^{+0.002}_{-0.000}
- Bottom flange width: .506
- Bottom flange thickness: .560
- Overall width: .910
- Bottom flange thickness (alternative): .506
- Bottom flange thickness (alternative): .356 MIN

A note indicates a tolerance of .625 TYP for the top flange thickness.

Technical drawing of a vertical shaft with various dimensions and tolerances. The drawing includes a circular feature labeled "IS" with a leader line pointing to a cloud-shaped feature labeled "R.0625 TYP". The shaft has a total height dimension of 8.618. The shaft diameter is specified as .910. The shaft has a shoulder with a width dimension of .533. The shaft has a hole with a diameter dimension of .362 and a tolerance of $^{+.002}_{-.000}$. The shaft has a hole with a diameter dimension of .356 and a tolerance of MIN. The shaft has a hole with a diameter dimension of .560 and a tolerance of $^{+.002}_{-.000}$. The shaft has a hole with a diameter dimension of .560 and a tolerance of MIN.

11	R	647.3917	2			DOUBLER		1		8	
F/N	TC	PART NUMBER	3903	3902	3901	DESCRIPTION		MATERIAL		SPECIFICATION	
DOCUMENTS EFFECTED:						CHANGE CATEGORY		DER REVIEW REQUIRED			
☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM						☐ MAJOR ☒ MINOR		☐ YES ☒ NO			

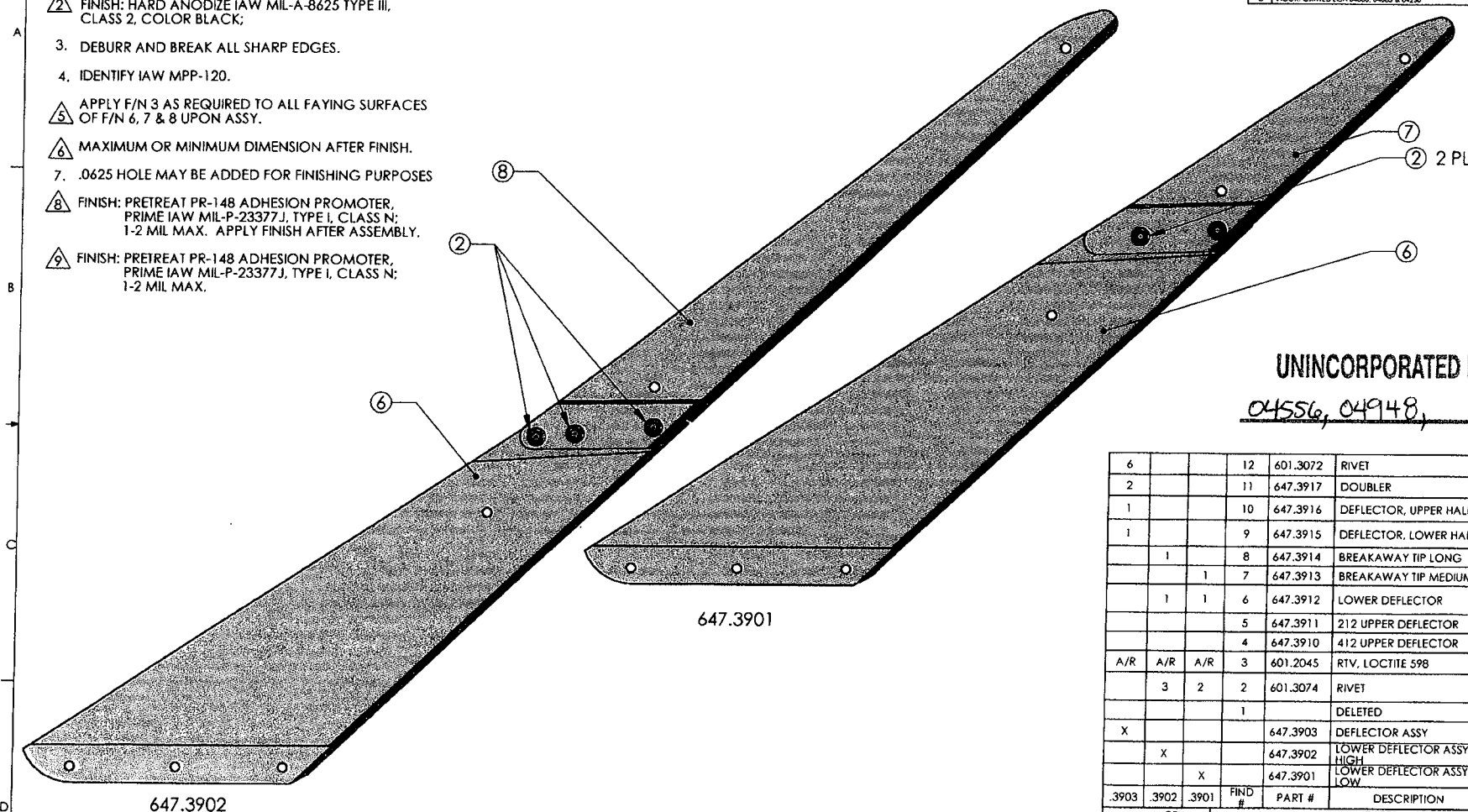
SHEET 12, ZONE B5 IS:

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NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
- 5 APPLY F/N 3 AS REQUIRED TO ALL FAYING SURFACES OF F/N 6, 7 & 8 UPON ASSY.
- 6 MAXIMUM OR MINIMUM DIMENSION AFTER FINISH.
- 7 .0625 HOLE MAY BE ADDED FOR FINISHING PURPOSES
- 8 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N: 1-2 MIL MAX. APPLY FINISH AFTER ASSEMBLY.
- 9 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N: 1-2 MIL MAX.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE RELEASE: PPI		N/C
N/C	INITIAL RELEASE	09/10/09	P. BRAVO
A	INCORPORATED ECH 02864, 03537 & 03595	07/24/12	P. BRAVO
B	INCORPORATED ECH 04025	08/02/13	P. BRAVO
C	INCORPORATED ECH 04038, 04085 & 04230	11/18/13	P. BRAVO



UNINCORPORATED ECN(s)

04556, 04948,

6			12	601.3072	RIVET	CR3213-6-9	
2			11	647.3917	DOUBLER		
1			10	647.3916	DEFLECTOR, UPPER HALF	△	△
1			9	647.3915	DEFLECTOR, LOWER HALF	△	△
	1		8	647.3914	BREAKAWAY TIP LONG	△	△△
		1	7	647.3913	BREAKAWAY TIP MEDIUM	△	△△
	1	1	6	647.3912	LOWER DEFLECTOR	△	△△
			5	647.3911	212 UPPER DEFLECTOR	△	△△
			4	647.3910	412 UPPER DEFLECTOR	△	△△
A/R	A/R	A/R	3	601.2045	RTV, LOCTITE 598		△
	3	2	2	601.3074	RIVET	MS20470AD 6-12	
			1		DELETED		
X				647.3903	DEFLECTOR ASSY		△
	X			647.3902	LOWER DEFLECTOR ASSY		
		X		647.3901	LOWER DEFLECTOR ASSY		
.3903	.3902	.3901	FIND #	PART #	DESCRIPTION	MAT'L	SPEC
QTY				PARTS LIST			
NEXT ASSY (S)				ORIGINAL DATE			
647.3800				DRAWN BY			
				CHECKER			
				DRAWING APPROVAL			
				CONTRACT NO.			
				UNLESS OTHERWISE SPECIFIED			
				DIMENSIONS ARE IN INCHES			
				TOLERANCES ARE:			
				2 PLACE DECIMALS ±.01			
				3 PLACE DECIMALS ±.005			
				ANGLES ±.5°			
				SEE CA-GA CODE			
				DWG. NO. 071M26			
				REV. C			
				SCALE NONE			
				SHEET 1 OF 12			

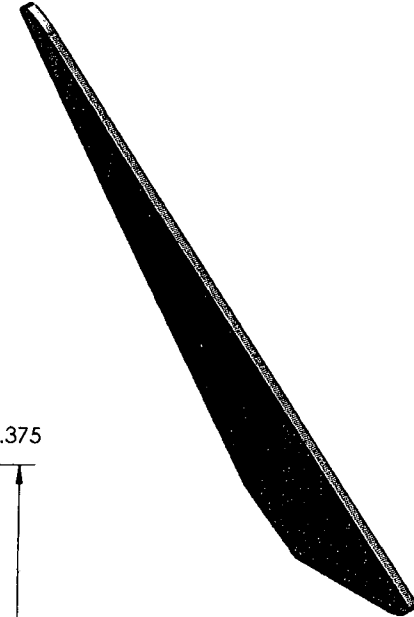
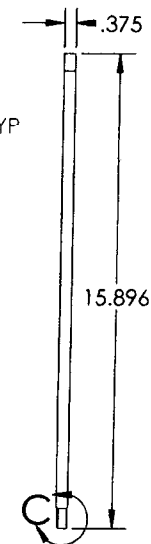
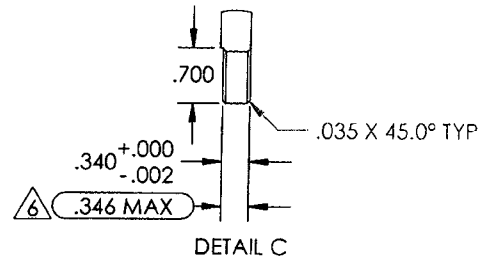
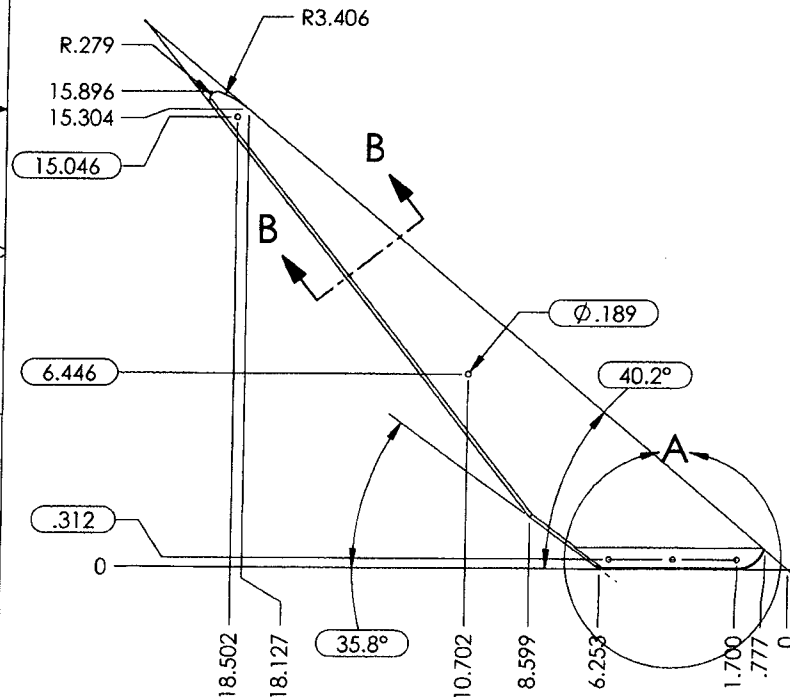
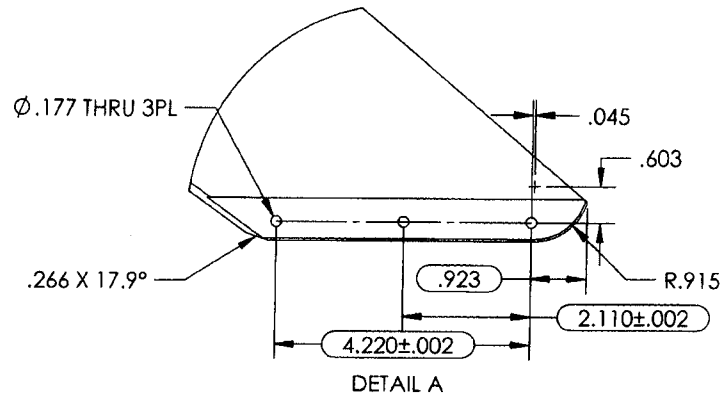
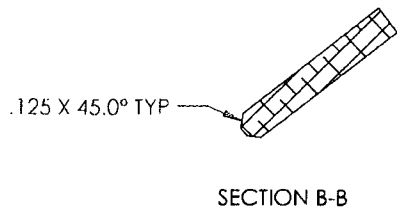
APICAL INDUSTRIES

2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

647.3900

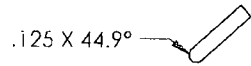
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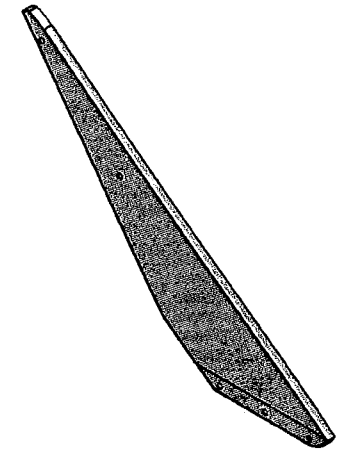
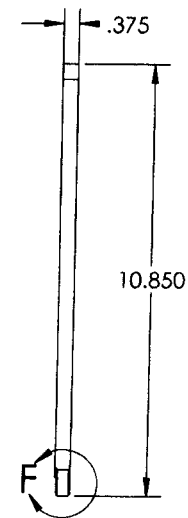
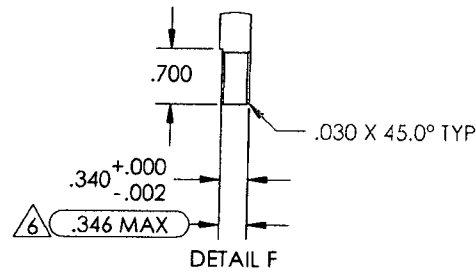
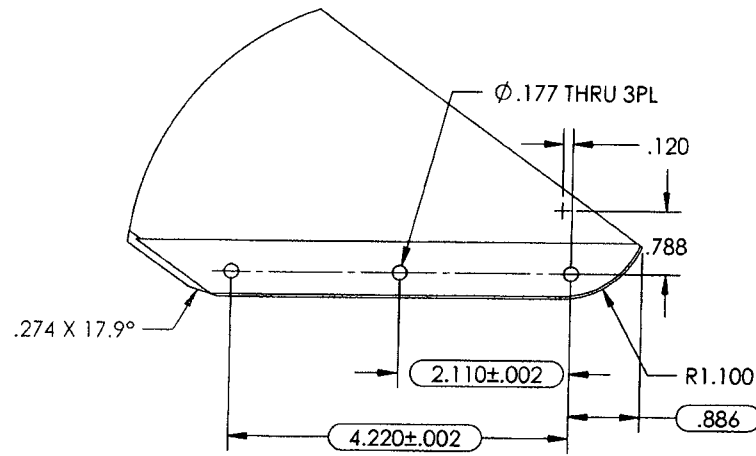
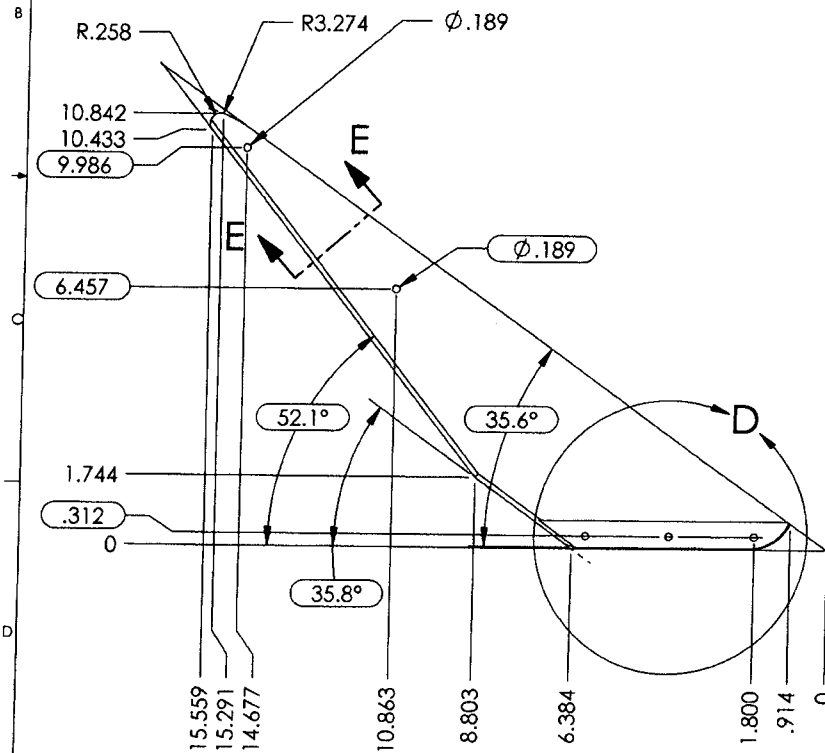
647.3911

ORIGINAL DATE (MM-DD-YY) OR 10-09		APICAL INDUSTRIES	
DRAWN BY D.SCHUR		2608 TEMPLE HEIGHTS DR.	
CHECKED BY D.BARKER		OCEANSIDE, CA, 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAYO		DEFLECTORS	
CONTRACT NO.		647.3900	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET B	REV. C
SCALE NONE		SHEET 2 OF 12	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



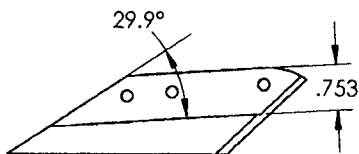
SECTION E-E



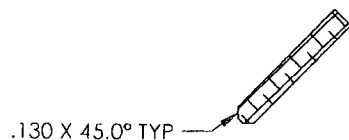
647.3910

ORIGINAL DATE JMO-DA-1781 09-10-97		APICAL INDUSTRIES	
DRAWN BY: CHICKER		2608 TEMPLE HEIGHTS DR.	
DLSCHUR		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO		DEFLECTORS	
CORRECTION NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm$.01 3 PLACE DECIMALS $\pm$.005 ANGLES $\pm$.5°		SIZE B	REV C
		CAGE CODE 07M26	DWG. NO. 647.3900
		SCALE: NONE	SHEET 3 OF 12

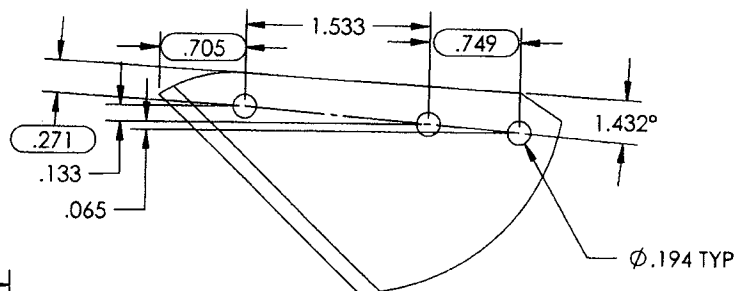
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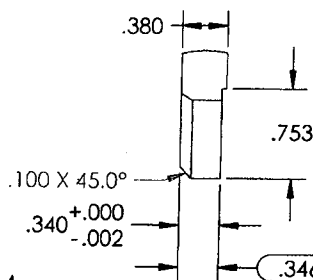
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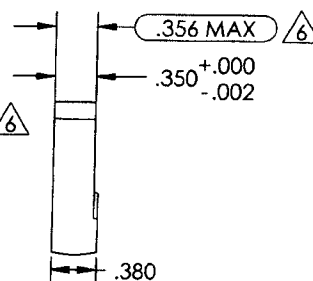
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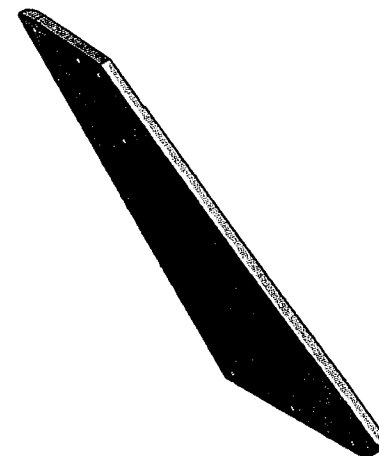
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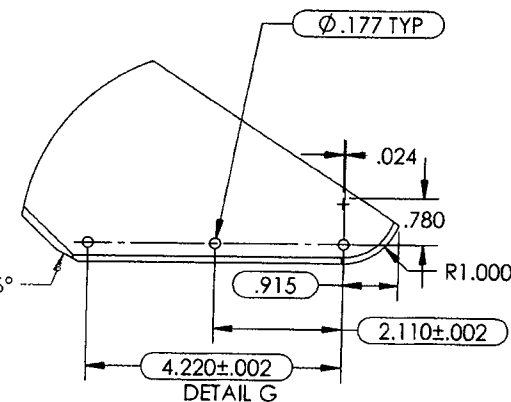
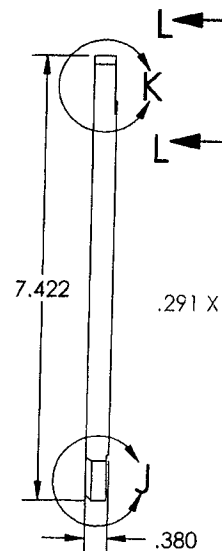
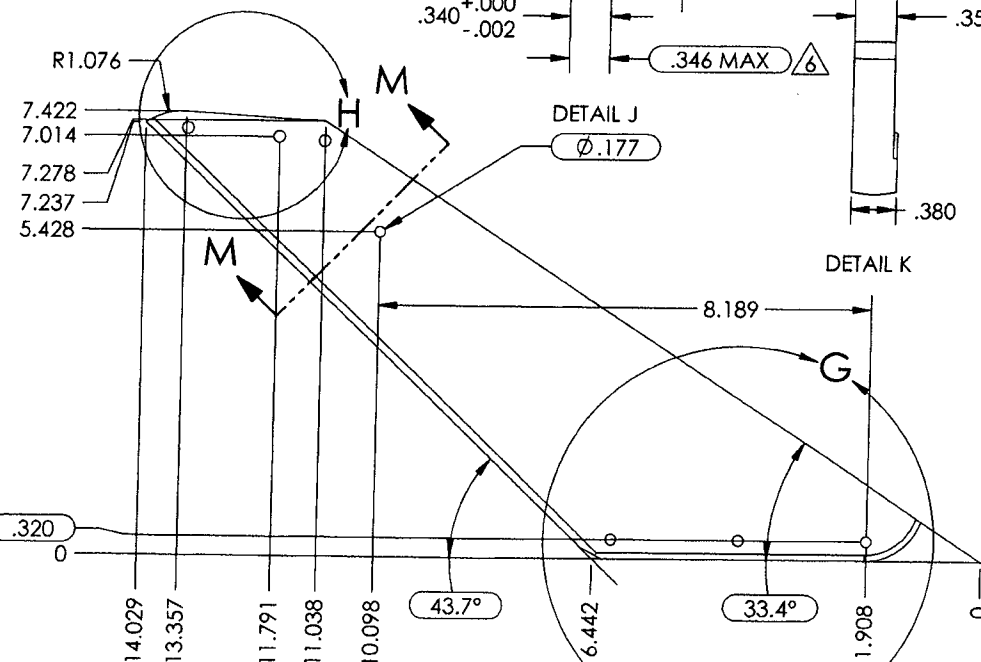
DETAIL J



DETAIL K



647.3912



DETAIL G

ORIGINAL DATE 09-10-09		APICAL INDUSTRIES	
DRAWN BY D.SCHUP	CHECKED BY D.BARKER	2608 TEMPLE HEIGHTS DR.	
DRAWING APPROVAL M. BRAVO		OCEANSIDE, CA. 92056-3512 (760)724-5300	
CONTRACT NO.		DEFLECTORS	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET B	REV. C
CAGE CODE 07M26		DWG. NO. 647.3900	SHEET 4 OF 12
SCALE NONE			

1 2 3 4 5 6 7 8

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A

B

C

D

12.148

11.192

10.597

0

3.875

3.129

3.123

0

8.611

7.876

R.267

R3.354

T

T

SECTION T-T

.175 X 45.0° TYP

3.072

.740

.306

1.556

2.306

3.068

.931

R1.671

.418

SECTION AB-AB

Ø.189 THRU 2PL

Ø.194 THRU 3PL

42.83°

37.1°

.824

R.050 TYP

.910

.533

.362^{+0.002}_{-.000}

.356 MIN

6

.560

AB

AB

8.618

647.3914

ORIGINAL DATE: 07-12-09
DRAWN BY: D.SCHUR
CHECKED: D.BARKER
DESIGNING APPROVAL: P. BRAVO
DILIGENT REVIEW: K. CONTRA CT No.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACE DECIMALS ±.01
3 PLACE DECIMALS ±.005
ANGLES ±.5°

SHEET: 1 OF 12
CAST CODE: R
DWG. NO: 07/M16
SCALE: NONE

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

DWG. NO: 647.3900
REV: C

SECTION T-T

SECTION AB-AB

647.3914

ORIGINAL DATE (MM/DD/YY) 07-15-09 DRAWN BY D. SCHUR DRA WING APPROVAL P. BRAVO 07/15/09 CONTRACT NO.	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760)724-5300															
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1. PLACE DECIMALS ±.005 2. PLACE DECIMALS ±.010 3. PLACE DECIMALS ±.001	DEFLECTORS <table border="1"> <thead> <tr> <th>SIZE</th> <th>CAGT CODE</th> <th>DWG. NO.</th> <th>REV</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>R</td> <td>07M16</td> <td>647.3900</td> <td></td> <td></td> </tr> <tr> <td colspan="3">SCALE NONE</td> <td colspan="2">SHEET 4 OF 12</td> </tr> </tbody> </table>	SIZE	CAGT CODE	DWG. NO.	REV	C	R	07M16	647.3900			SCALE NONE			SHEET 4 OF 12	
SIZE	CAGT CODE	DWG. NO.	REV	C												
R	07M16	647.3900														
SCALE NONE			SHEET 4 OF 12													

1 2 3 4 5 6 7 8

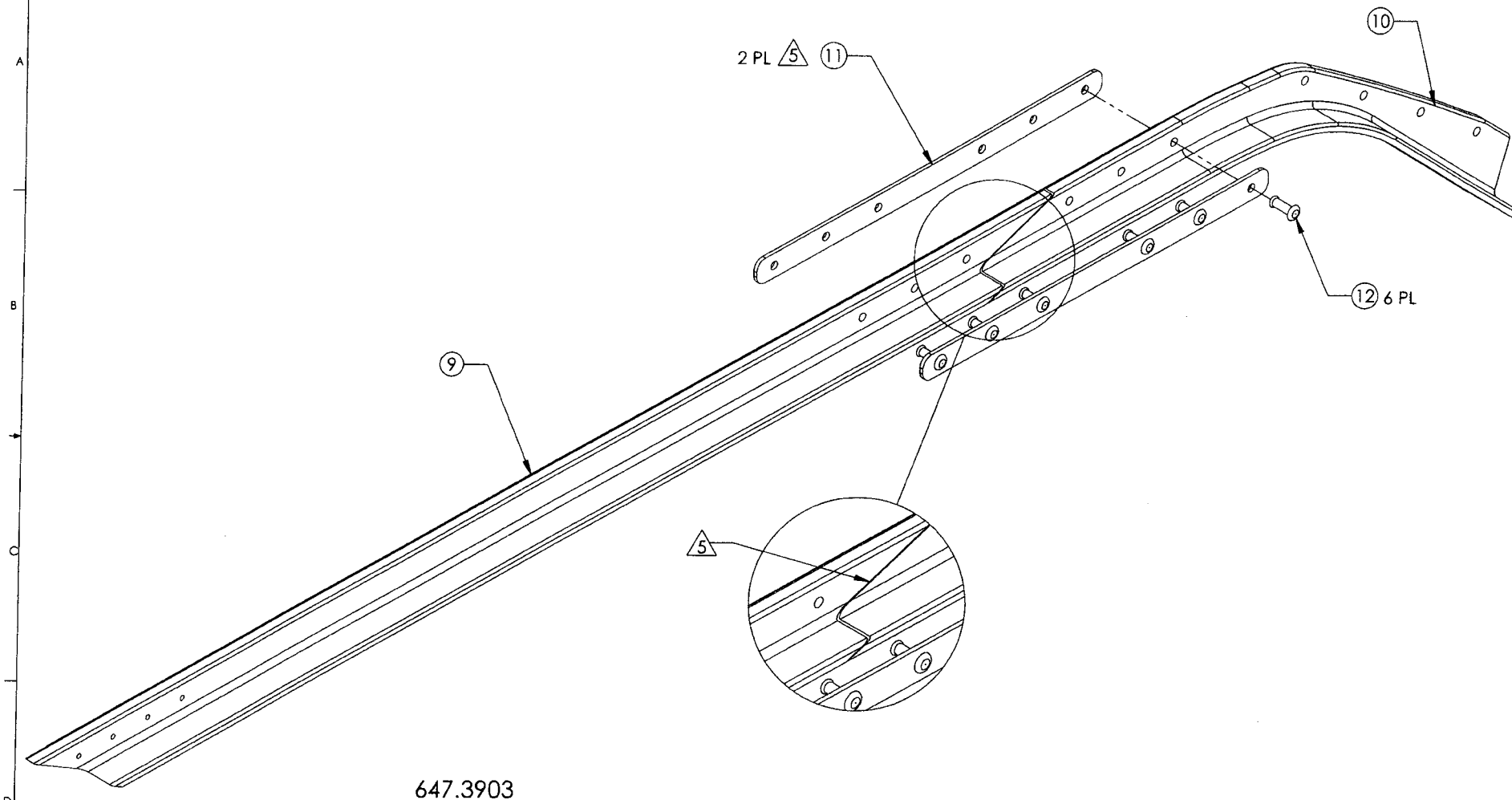
A

B

C

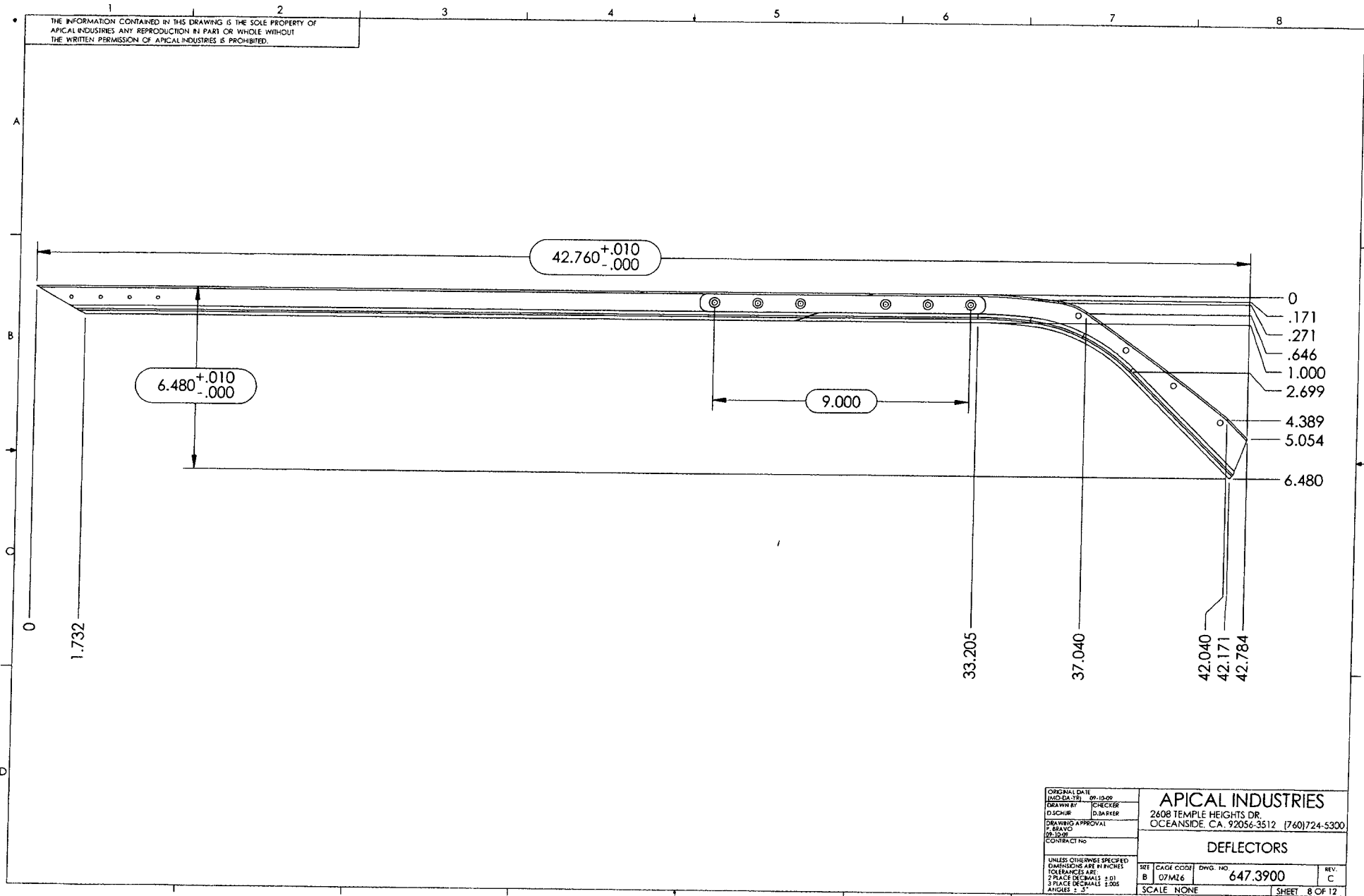
D

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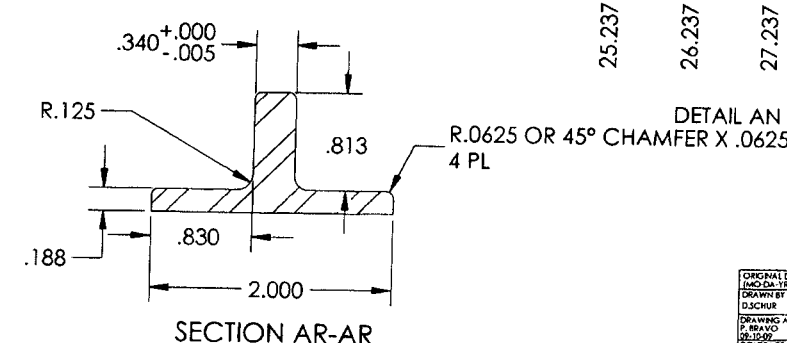
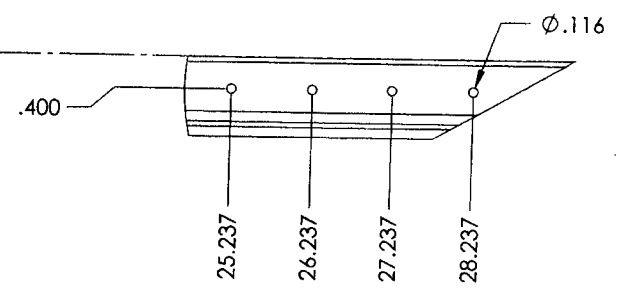
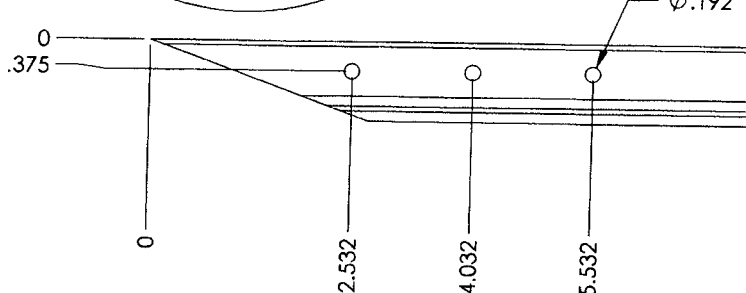
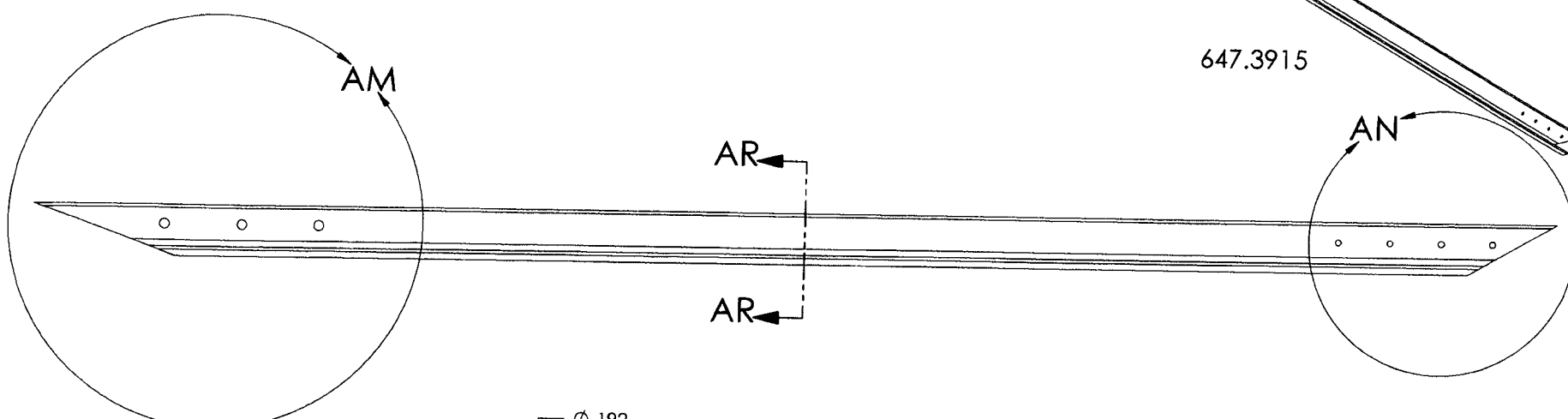


ORIGINAL DATE: 07-10-00 (MO-DA-YR)		APICAL INDUSTRIES	
DRAWN BY: SCHUCH		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: DABNER		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL: P. MARINO		DEFLECTORS	
DATE: 07-10-00		UNLESS OTHERWISE SPECIFIED	
CONTRACT NO.		DIMENSIONS ARE IN INCHES	
		TOLERANCES ARE:	
		2 PLACE DECIMALS $\pm .01$	
		3 PLACE DECIMALS $\pm .005$	
		ANGLES $\pm .5^\circ$	
SHEET	CAGE CODE	ENG. NO.	REV.
B	07M26	647.3900	C
SCALE: NONE		SHEET 7 OF 12	

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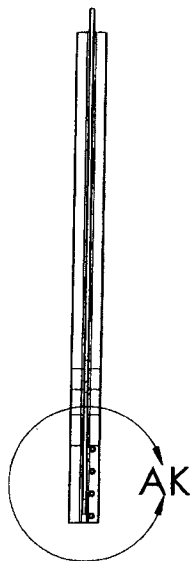


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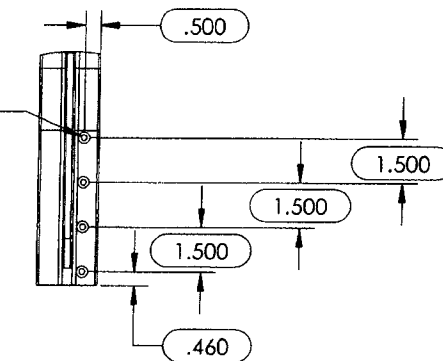


ORIGINAL DATE (M/D/YR) OR 10-09		APICAL INDUSTRIES	
DRAWN BY D.SCHUR	CHECKER D.BARKER	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL P. BRAYO 06/15/09		DEFLECTORS	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ± .5°		SHEET 8	REV. C
CAGE CODE B 071M26		DWG. NO. 647.3900	SCALE NONE
		SHEET 9 OF 12	

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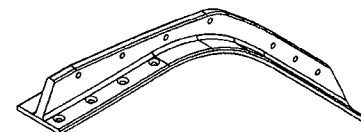
4X $\phi .196 \pm .010$ THRU ALL
✓ $\phi .385 \pm .020 \times 100^\circ \pm 1.000^\circ$



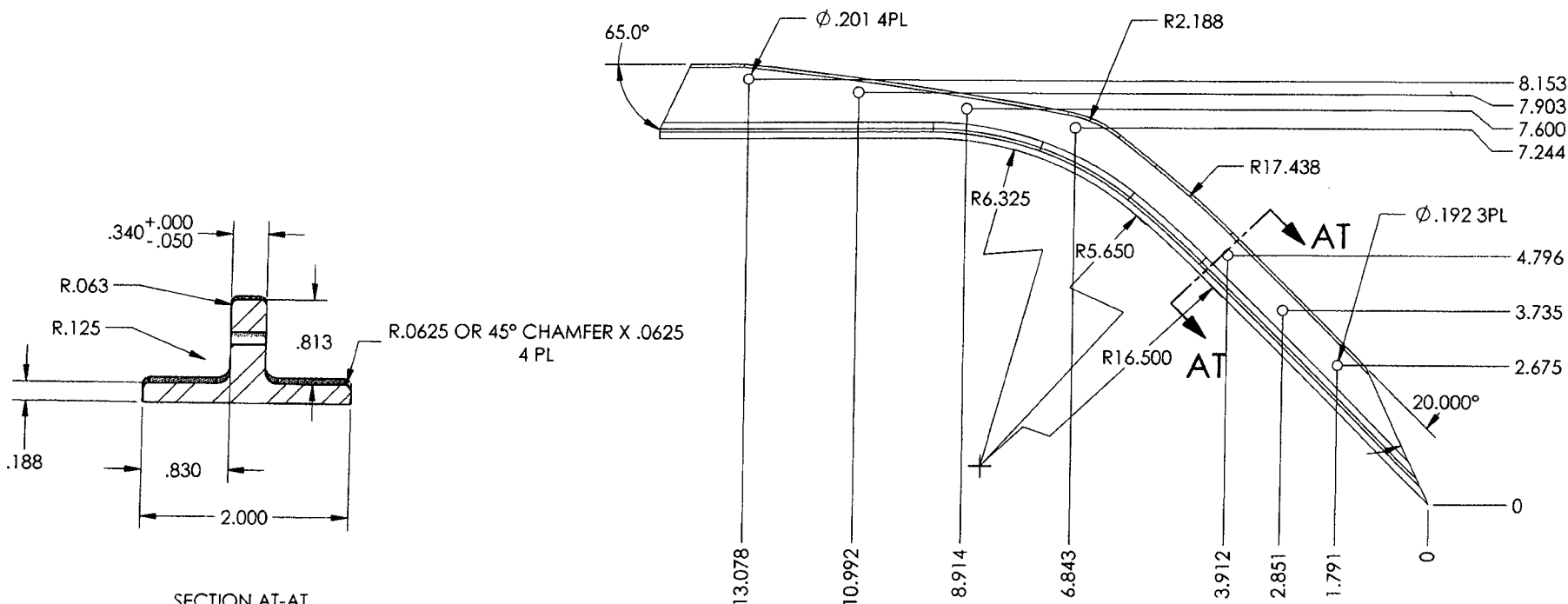
647.3915

ORIGINAL DATE (MM-DD-YY) 09-10-06		APICAL INDUSTRIES	
DRAWN BY: D.SCHUR		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: D.BARTER		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAYO 09-10-06		DEFLECTORS	
CONTRACT NO.		DWG. NO. 647.3900	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET 10 OF 12	REV C

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647.3916



ORIGINAL DATE 1/20/09		APICAL INDUSTRIES	
DRAWING BY D.SCHUR		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAYO		DEFLECTORS	
CONTRACT NO.		647.3900	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .01$ 3 PLACE DECIMALS $\pm .001$ ANGLES $\pm .5^\circ$		SHEET B	REV. C
SCALE NONE		SHEET 11 OF 12	

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R.250
4 PL

.625

0

.500

2.000

3.500

6.500

8.000

9.500

10.000

647.9317
3517

.090

Ø.196
6 PL

ORIGINAL DATE 06-10-09
DESIGNED BY D. BARKER
CHECKED BY D. BARKER
DRAWING APPROVAL
P. BRAY
06-10-09
CONTRACT NO.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
FRACTIONS ARE
2 PLACE DECIMALS ±.01
ANGLES ±.5°

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

SIZE B	CAGE CODE 07M16	DWG. NO. 647.3900	REV. C
SCALE NONE			SHEET 12 OF 12



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO31336**

Purchase Order Date 2/11/2016

PO Print Date 2/16/2016

Page Number 1 of 5

Order From:

VC-ATG001

Ship To: DART AEROSPACE LTD

A.F.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED

FEB 16 2016

Contact Name

Vendor Phone 613-446-4544

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Ship To Contact

Terms

Net 30

Ship To Phone

Currency

CAD

Ship Via:

VENDOR'S TRUCK

FOB

FCA -- (Free Carrier)

Ship Acct:

Line No	Reference Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
Line Comments		Promise Date					
Delivery Comments							

1	138766	647.39T7 DOUBLE REV. C	2/16/2016		40.00	\$7.10	\$284.00
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Yes

2/16/2016

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

RUSH PART REQUIRED 10 PCS FOR NEXT TUESDAY

Line Total: **\$284.00**

2	137334	647.1512 BREAKAWAY TIP REV. A	2/19/2016		6.00	\$13.20	\$79.20
---	--------	----------------------------------	-----------	--	------	---------	---------

Yes

2/19/2016

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Line Total: **\$79.20**

Note:

2/16/2016



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 911246

Date: 16-Feb-16

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

CHANTAL LAVOIE

Terms		Ship Via	
Quantity	Description		
	PLEASE REFERENCE THE PACK LIST NUMBER ON ALL CORRESPONDENCE TO THIS SHIPMENT. IF YOU HAVE ANY QUESTIONS, PLEASE CALL AT (613) 446-4544.		
40 ea	Part: 138766 647.3917 double Job: 19165	Rev: C Line: 1	PO: 31336 <i>SP/6-02-16</i>
DATE: <u>16/2/16</u>			
CERTIFIED SIGNATURE: <u><i>[Signature]</i></u>			
RECEIVER SIGNATURE: _____			
Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			
CERTIFICATE OF CONFORMANCE			
A.T.G. INDUSTRIES INC. CERTIFIES THAT ALL ITEMS IN THIS SHIPMENT CONFORM TO REQUIREMENTS.			
MADE IN CANADA.			